

Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Title V proposed/final permit, No. V-97-015

CINCINNATI GAS AND ELECTRIC EAST BEND STATION

Rabbit Hash, Kentucky 41091

December 5, 2003

Completed by: Christina A. Forgacs

SOURCE DESCRIPTION, CONTROL EQUIPMENTS & CONSTRUCTION DATE:

- E. Unit 01: None
- E. Unit 02: Unit 2: Pulverized coal-fired, dry bottom, wall-fired unit equipped with an electrostatic precipitator, scrubber with use of a lime slurry with a venturi quenching section, and low nitrogen oxides burners, construction commenced 1976.
- E. Unit 03: Unit 3: Coal/Petroleum coke handling operations includes barge unloader, stockpile, conveyor E, and carry all bin including load-in and load-out, which diverts coal from the crusher to the open stockpile; stockpile includes use of watering and compaction; construction commenced 1976.
- E. Unit 04: Unit 4: Coal crushing and processing operations includes conveyors A, B, C, D, F-1, G-1 and transfer points, primary crushers, coal bunker, coal pile load-in, coal pile reclaim; two crushers equipped with enclosure and baghouse, conveyors and transfer points equipped with enclosure and baghouse, coal bunker load-in equipped with baghouses, coal pile reclaim equipped with baghouses; construction commenced 1976.
- E. Unit 05: NA.
- E. Unit 06: NA.
- E. Unit 07: Eight cold cleaning degreasers with construction commenced about 1981. See permit for operating and control measures required.
- E. Unit 08: NA.
- E. Unit 09: Unit 9: Main flyash storage silo loadout to dump trucks, construction commenced 1976.
- E. Unit 10: Unit 10: Flue gas desulfurization sludge fixing plant equipped with enclosures for conveyors and transfer points, enclosure and two hydrostatic rotoclones (wet type dust collectors) for the two pug mills, construction commenced 1976.
- E. Unit 11: Unit 11: Plant roadways with construction commenced in 1976.
- E. Unit 12: Unit 12: Landfill operations includes landfill, construction commenced in 1976 equipped with watering for control.
- E. Unit 13: Unit 13: Emergency diesel generator with construction commenced in 1976.
- E. Unit 14: Unit 14: Lime handling operations equipped with lime barge unloader, unloader hopper, truck dump operations for main lime silo, main lime silo truck loading, and truck dump to lime fixing plant lime hopper; construction commenced 1976 for this unit; control measures and devices include enclosure, partial enclosure, and baghouses.

REGULATION APPLICABILITY:

All the applicable regulations to the emission units are listed in the permit. The following regulations are not applicable based on the applicability date of regulation, unit size, and/or definition of an affected facility per the regulation:

Regulations not applicable to Unit 2 due to applicability date or size of unit:

Regulation 401 KAR 59:016, New electric utility steam generating units, incorporating by reference 40 CFR 60, Subpart Da

Regulation 401 KAR 60:042, Standards of performance for industrial-commercial-institutional steam generating units, incorporating by reference 40 CFR 60, Subpart Db

Regulation 401 KAR 60:043, Standards of performance for small industrial-commercial-institutional steam generating units, incorporating by reference 40 CFR 60, Subpart Dc

Regulation not applicable to Unit 3 (fossil fuel barge unloader, open stockpile, conveyor E, and carry all bin including load-in and load-out) due to definition of affected facility:

Regulation 401 KAR 60:250, Standards of performance for coal preparation plants, adopting by reference 40 CFR 60, Subpart Y. (Barge unloader is not a thermal dryer, or pneumatic cleaning equipment, or coal processing and conveying equipment by definition; the unloader, conveyor E, and carry all bin including load-in and load-out, do not convey coal or remove coal from machinery to reduce the size of coal nor do these separate coal from refuse; the stockpile is open which does not meet definition of coal storage system under Subpart Y; carry all bin including load-in and load-out are transfer equipment used to move coal, diverting coal before the crusher and routing to the open stockpile, and does not move coal to or from the crusher, and does not transfer coal for shipment, therefore it does not meet the definition of an affected facility under Subpart Y.)

Regulation not applicable to Unit 7 (Eight Cold Cleaning degreasers):

These degreasers do not use halogenated solvents therefore 40 CFR 63, Subpart T does not apply.

Regulation not applicable to Unit 12 (Landfill):

This landfill does not accept municipal solid waste and therefore 40 CFR 60, Subparts WWW or Cc do not apply.

Regulation not applicable to Unit 14 (Lime Handling) due to applicability date:

Regulation 401 KAR 59:310, New nonmetallic mineral processing plants (40 CFR 60, Subpart OOO as modified by Section 2 of Regulation 401 KAR 59:310), because construction of Unit 14 commenced in 1976.

COMMENTS:

- C The permittee must comply with the Acid Rain Permit, Number AR-96-08 issued December 11, 1996.
- C The permittee has not proposed any alternate operating scenario for any of the emission units.
- C Unit 2 boiler has Continuous Emission Monitors for sulfur dioxide, nitrogen oxides, and opacity which are used to demonstrate compliance.
- C Regarding particulate matter emitted from Unit 2, the permittee will be required to conduct one performance test for particulate emissions in the first six months after permit issuance to demonstrate compliance with the allowable standard and to develop the indicator range/upper limit for opacity. The permittee may assure continuing compliance with the particulate standard using continuous opacity monitoring (COM) data as an indicator and operating the process and control equipment such that the opacity of emissions collected by COM (averaged over three hours) does not exceed the upper limit of opacity determined in performance testing as described in the permit; In case of an excursion, the permittee will be required to demonstrate compliance with the particulate standard through performance testing as described in the permit. If no other performance tests for particulates are performed, then a second performance test for particulate matter will be required for Unit 2 in the third year of the permit.
- C Unit 3 barge unloader, stockpile, carry all bin including load-in and load-out, and conveyor E are subject to fugitive emissions Regulation 401 KAR 63:010 and are considered to be in compliance when using control measures required by 63:010.
- C Unit 4 coal crushing and processing has a periodic monitoring requirement to conduct annual Method 9 opacity readings and weekly inspection and necessary repair of control equipment to assure compliance, as described in the permit.
- C Unit 7 degreasers have operating and control requirements specified by Regulation 401 KAR 59:185; thus as long as these guidelines are followed with the solvent usage rate requirement met these are considered to be in compliance.
- C Unit 9 main flyash storage silo loadout to dump trucks is subject to fugitive emissions Regulation 401 KAR 63:010 and are considered to be in compliance when using control measures required by 63:010.
- C Unit 10 flue gas desulfurization sludge fixing plant has a periodic monitoring requirement to conduct annual Method 9 opacity readings and weekly inspection and repair as necessary of control equipment to assure compliance, as described in the permit. As long as the permittee properly operates the control equipment emissions are considered minimal with the unit considered to be in compliance. (See formula added to permit and response to EPA comment #8.)
- C Unit 11 plant roadways are subject to fugitive emissions Regulation 401 KAR 63:010 and are considered to be in compliance when using control measures required by 63:010.
- C Unit 12 landfill operations are subject to fugitive emissions Regulation 401 KAR 63:010 and are considered to be in compliance when using control measures required by 63:010.
- C Unit 13 emergency diesel generator is not subject to any applicable requirements, and is an engine, not a heat exchanger.

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COMMENTS CONTINUED:

- C Unit 14 lime handling operations are subject to fugitive emissions Regulation 401 KAR 63:010 and are considered to be in compliance when using control measures required by 63:010.
- C Regulation 401 KAR 50:012, General application, was used to establish the Reasonably Available Control Technology requirement for nitrogen oxides emissions for Unit 2.
- C Emissions unit 2 is equipped with a sulfur dioxide scrubber which makes it difficult to read opacity using Reference Method 9. Thus, the permittee may assure compliance with the opacity standard using data collected by the continuous opacity monitoring system (COM) in lieu of Reference Method 9.
- C The three hour averaging time associated with the particulate standards is applicable during compliance demonstration through performance testing when a test is required by the Division.
- C The permittee shall submit a compliance assurance monitoring (CAM) plan for applicable emissions units with an application for significant revision or with the application for Title V permit renewal.